
Factors Influencing the Organization of Work in a Fish Processing Industrial Enterprise

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Abstract:

Purpose: This publication aims to assess employees' organization of work on the example of a fish processing company. The subject of research is an exemplary industrial enterprise operating in the fish processing sector in Poland.

Design/Methodology/Approach: A survey method and participating observation was used in this publication. The study was carried out on a group of 130 employees of a company involved in the fish processing industry. The values of the analyzed indicators were calculated by using the Excel program and Statistica 13.

Findings: The conducted research allowed to assess work organization within the surveyed fish processing company. The studies confirmed the H1 hypothesis: The organization of work in the surveyed enterprise is average. Work organization assessment level among the employees reached 3.64 and can be considered as an average score. The research also confirmed the H2 hypothesis: In the surveyed enterprise, there are statistically significant differences in assessing the effectiveness of work between the Polish and Ukrainian employees. Work effectiveness is evaluated better by the Ukrainian (4.29) rather than the Polish employees (3).

Practical Implications: The most important practical implication of the carried out research in that it is worth hiring immigrants, particularly Ukrainian workers in Poland. The research shows that they perceive the Polish industry organization much better than the Poles.

Originality/Value: The analysis showed the influence of employees' nationality on the assessment of work organization in the surveyed company. This can be viewed as proving that employing foreigners in the industry can be beneficial.

Keywords: Management, business, fish processing, organization of work, immigration.

JEL Codes: R3, R11, R12.

Paper type: Research article.

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1. Introduction

The issue of work organization is significant for industrial enterprises. A company's effectiveness depends on its ability to organize work, which determines its functioning on the market. An interesting issue, especially important in contemporary Europe, is the work of foreigners. A comparative analysis of the company's assessment of the work organization was carried out among domestic (Poles) and foreign (Ukrainians) workers. This publication aims to assess the efficiency of employees works on the example of a fish processing company. Two hypotheses were formulated in the research:

H1 –The employees' organization of work of the surveyed company is at an average level.

H2 – There are statistically significant differences in the surveyed enterprise in assessing the effectiveness of work between the Polish and Ukrainian employees.

2. Literature Review

Organizations are the basic management element in the economy. However, they have been present since antiquity; to this day, they have not been fully understood, and a way to perceive them uniformly is yet to be developed. The process of organization is the second most significant management function. The first is planning to set the organization's objectives, i.e., what must be achieved by the organization, while the organization's process focuses on finding the best ways to achieve said objectives, and more precisely – on finding the best way to group both activities and resources (Idris and Naqshbandi, 2019; Olkiewicz, 2018). Therefore, an organization is a complex system aimed at achieving the desired goals using a combination of resources with a certain type of activity (Rubmann *et al.*, 2015). By perceiving an organization as a set of resources and activities, one can learn what type of activities or processes take place or should take place in the organization in order for it to achieve its objectives efficiently (Becker and Scholl, 2006; Lozano and Platonoff, 2013; Withers *et al.*, 2018; Wolniak, 2019). In this way, for example, we can see that for a production company to efficiently deliver orders, the following activities are necessary: production planning, supply planning, planning and selection of personnel, purchase of raw materials, packaging and machinery, conducting production processes, quality control of production processes (Wolniak *et al.*, 2020; Tarigan, 2018; Bakker and Demerouti, 2007; Khalili Shavarini *et al.*, 2013).

By art. 128 of the employment code, a working time is when an employee remains at the disposal of an employer in the workplace or other place designated for work. The term being at the employer's disposal means that the working time also stands for being available for work but not providing it at the time (Szurgacz, 2017; Liszcz, 2017; Lo, 2007). The working time system is a set of guidelines related to the employment law's working time that includes provisions on the daily working time

standard, weakly working hours, the reference period, etc. It should be underlined that the working time, especially the way it is organized, should be coordinated with the working methods' changes within and outside the enterprise (Gheorghe, 2020; Miśkiewicz and Wolniak, 2020; Kłos, 2013; Iacovoiu, 2020; Spinuzzi, 2012).

A working time system is a set of legally permitted rules connected with the organization of working time that includes indications for applying a given work organization, the allowable elongations of working time, the maximum length of the settlement period, and the procedures of its implementation. Working time systems' organization can be distinguished as follows: basic working time, balanced working time, working time in continuous motion, interrupted working time, task-based working time, reduced working week, weekend work, and reduced working time (Gazizulina *et al.*, 2017; Bąk, 2006). A tool that is often proposed to adapt the working time system to the current and future objectives of an organization is to make the working time more flexible by, *inter alia*, extending and shortening the working time that is limited by the provisions of the employment law by the employer's needs (Keese, 2020; Directive 2003/88/EC). It is not the only or the most appropriate solution to this problem. It is not sufficient in a situation where a small demand for work is combined with intermittent work or even long periods of complete lack of it. This phenomenon is becoming more common in developed economies and will continue to intensify. Hence, new forms of employment and working time are being exploited, often irregular working time with relatively short periods of paid labor and long periods of inactivity (Suciu and Ion, 2019; Branda *et al.*, 2019). Thus, the increasing use of casual work, contracting work, self-employment, and other flexible employment forms (Serrano, 2019).

A strategic approach to employees' working time means that a company seeks to link working time systems with the company's strategic objectives, making it an important tool facilitating a quick and flexible adaptation of an organization to its environment (UNECE, 2015). Within the company, working time systems may contribute to improved results, the increase of its operational efficiency, and thus increasing the company's competitiveness (Lozano Platonoff, 2013; Rizescu and Bucăța, 2020; Olkiewicz *et al.*, 2019; Eisenhardt and Sull, 2001).

Efficiency refers to the extent to which time, effort, or cost is used to carry out a planned activity to achieve the desired objective efficiently, meaning with a minimum generation of waste, expense, or unnecessary effort (Leitold *et al.*, 2019). Therefore, efficiency is a measurable, quantitative concept determined by the input output ratio. It also means measuring the results using inputs, *inter alia*, the number of labor-hours required for their production. Efficiency depicts how well an organization uses its resources to provide products or services and determines whether a company is making profits or incurs losses. A simple equation governs this, *i.e.*, the production value and the company must equal or exceed the outlays incurred (Olkiewicz *et al.*, 2018). There are five ways to increase efficiency:

- access to resources in quantity and quality that enable the achievement of the set objectives,
- optimal use of resources, savings and fighting against waste,
- systematization and simplification of work,
- introduction of automation and computer systems,
- creating teams to achieve the objectives more efficiently.

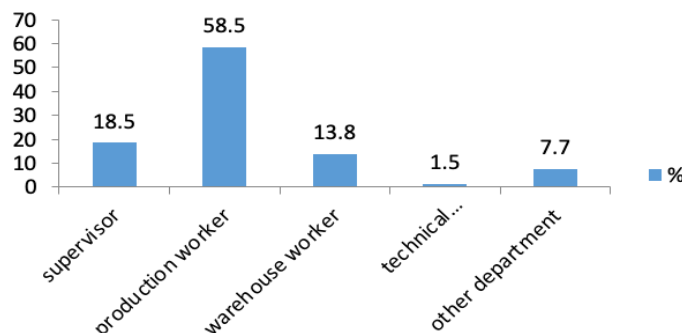
3. Methodology

The analysis of the efficiency of the work of the employees in this publication was made on the example of the BG Production fish processing company. The research was carried out by respondents replying to a questionnaire. The survey was completed by the employees in two locations: in Białogard and Wieniotów. The number of respondents totaled 130 employees.

Several 130 workers from the BG Production Sp. z o.o. (LLC) the company, 32.5% of all the employees, took part in the survey with 46 men and 84 women. There were 38 respondents below and 92 above the age of 30. The two aforementioned factors (age and gender) allowed to divide respondents into four social groups. Women up to the age of 30, women over the age of 30, men up to 30 and over the age of 30.

It is important to note that production employees include: trimming, filleting, portioning, packaging, coating, and smoking. It is the largest department in the enterprise. Supervisors are workers falling under the following positions: team leader, production manager, quality controller, or quality department manager. The technicians are mainly mechanics. The other department consists of social workers, drivers, security guards, logisticians, and human resources workers. The employment structure in the research is presented in Figure 1.

Figure 1. The employment structure of the researched population.



Source: Own creation.

Mainly Polish and Ukrainian workers were employed in the surveyed company. Approximately 60% of the employed staff were from Ukraine and 40% from Poland.

There were also several workers from the Philippines and Nepal. Because most workers were Polish and Ukrainian, the questionnaire was prepared in these two languages, as not all Ukrainians spoke Polish fluently. The BG Production Sp. z o.o. company was founded in Poland in 2010, initially to provide processing services for Atlantic salmon for the Scandinavian market in the form of fresh fillets. The strict allocation to Western European markets has allowed the BG company to expand, develop, and achieve a high competitiveness level. BG Production currently employs a total of around 400 people. The company's goal is to shift the production of seafood products intended for European markets back to local markets.

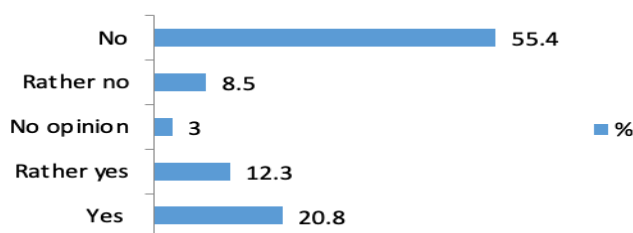
The criteria concerning the use of raw materials are imposed by the company's end customers' requirements. That is why the company aims at areas with slow-breeding fish with a firm texture of meat and better color. The second objective is to feed fish by using feeding systems based on sustainable sources to give a salmon natural flavor and aroma. The third objective is to provide fish with good living conditions such as feeding, clean cages, and a density of a maximum of 15 kg of fish per m³. The fourth goal is to make salmon into a finished product within a maximum of 72 hours since slaughter. The company has been cooperating with a few selected farmers in Northern Norway who can meet quality requirements. The company employs around 400 workers that produce about 30,000 tons of raw material per day in two plants. BG's markets include retail and catering companies located in Australia, France, Great Britain, Germany, Sweden, the USA, and Japan.

The management teams have experience in the production of fish and seafood. The company hires certified food technicians and engineers who continue education and learning programs. The most important principle of the company is to monitor and update their systems and staff constantly.

4. Research Results

The data in Figure 1 shows that over half (63.9%) of the respondents did not feel that they were under the pressure of time caused by excessive workload, while 33.1% faced this kind of pressure.

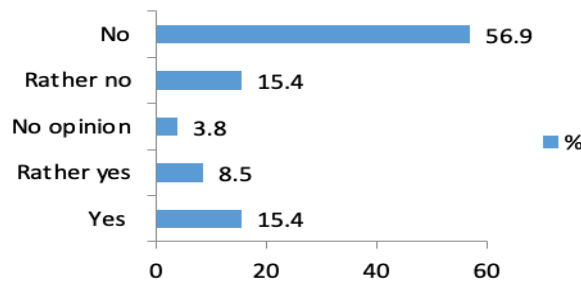
Figure 2. *Time pressure and excessive workload*



Source: *Own creation.*

According to the respondents (Figure 3), the transmission of information and work organization in the surveyed organization was functioning well. Among the surveyed workers, 71.3% believed that there were no problems in this regard, and only 23.9% stated that there were difficulties in providing information and the organization of work in the company.

Figure 3. Problems with information transmission and work organization

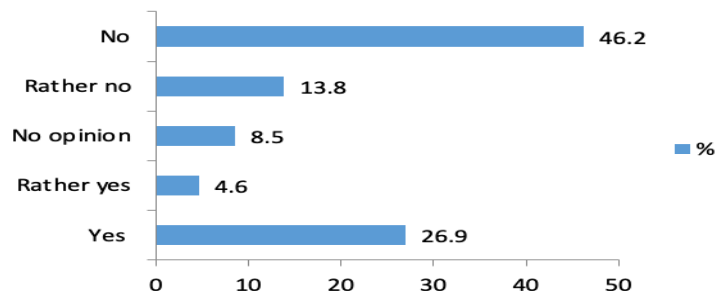


Source: Own creation.

Figure 4 presents the results of research on the respondents' perception of time pressure. Sixty workers definitely thought they were working under time pressure, six stated that they rather were not working under the pressure of time, 11 respondents did not express their opinion, and 18 believed that they were under time pressure during work. What is particularly worrying is that several employees in the company (35) stated that they were under time pressure at work.

The research results may be directly related to a specific job position held by the respondents. Certain positions in the company are indispensable for the production process. From these observations, it can be concluded that the trimming line employees felt the most time pressure. The organization of other departments is dependent on their work. If the trimming line cannot deliver the semi-finished product on time, other departments like the portioning or packaging departments will not be able to do their job.

Figure 4. Work under time pressure

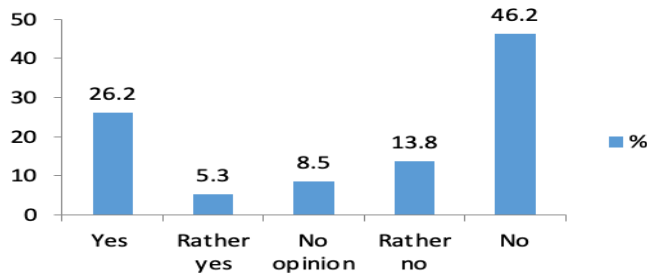


Source: Own creation.

Figure 5 shows the employees' assessment of workplace equipment. The research indicates that over half of the respondents (66.9%) thought that the workplace was well-equipped, which allowed them to work more efficiently, whereas 30% stated the opposite opinion, and 3.1% had no opinion. The fish processing plant provided their staff with, among others, protective clothing like shoes, trousers, sweatshirts, fleece, insulated gloves, rubber gloves, disposable aprons, caps, masks, sleeves, and nitrile gloves.

Appropriate "small" equipment had to be available on every workstation, i.e., knives, metal gloves, "spiders" (covers for metal gloves that prevent the glove from slipping), shovels, buckets, rulers, thermometers, or any office supplies. It has to be emphasized that tools used in the production hall and may come into contact with food must have an appropriate certificate and be detectable by a metal detector.

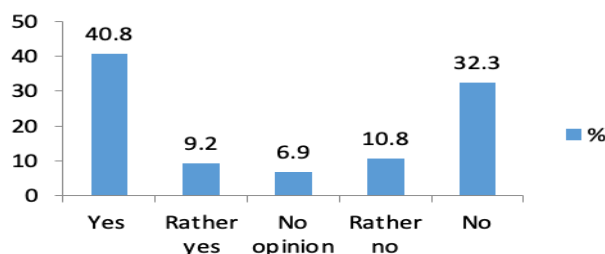
Figure 5. Workplace equipment



Source: Own creation.

Working time is one of the major elements of the Employment Law regulations. It sets time limits within which the employee is required by the employer to be ready to perform work. Working time is when the employee remains at the disposal of the employer in a work establishment or other place designated for work. Work pace in improving and increasing productivity and efficiency is a significant factor, which, unfortunately, is often omitted or even deliberately violated.

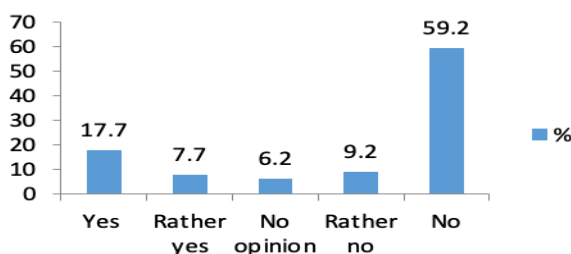
A steady work pace of an employee is the performance of an average skilled person who can maintain such a pace of work throughout his work shift that he does not experience fatigue. Performing work at a steady pace every day should allow an employee to regain his strength for the next working day fully. Half of the respondents (Figure 6) stated that the surveyed organization's work pace was imposed by the machines, employer, or clients, while 43.1% believed it was not dependent on the aforementioned factors. A percentage of 6.9 of the workers had no opinion.

Figure 6. *Work pace*

Source: Own creation.

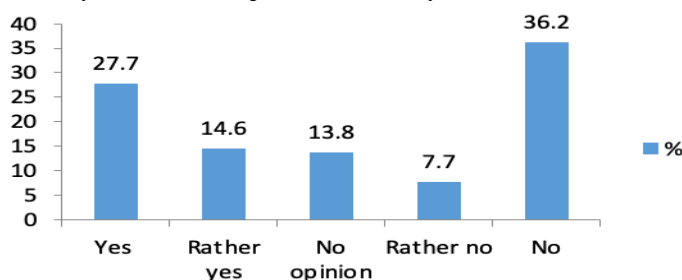
Figure 7 shows the respondents' assessment of the staff's possible to decide on the working hours, i.e., working time flexibility. More than half of the surveyed employees (68.4%) replied that they had no say when they started and finished labor, while 25.4% said they had. The research results are connected with the nature of work in the BG Production company, which prevents such work flexibility. This also makes it difficult to take a day off on request. It is not prohibited because that would violate the Employment Law regulations, but it is not willingly granted, as Figure 8 depicts.

A leave at request is the employee's right, and the employee may or may not exercise this right. The employer cannot grant the employee leave on request without the employee's application. He is also obliged to grant no more than 4 days of leave in each calendar year at the employee's request and within the time indicated by him. The employee has to apply the request to leave no later than on the day the leave starts. Among the respondents, 42.3% stated that they had the possibility to take one or two days of leave from day today. Based on this data, it can be concluded that this group of employees had taken advantage of this possibility. On the other hand, 43.9% replied that it was impossible to take a day off on demand. The reasons for such a reply could be various. One of the reasons might be that these respondents held positions where it was difficult to find an immediate replacement. The employees who wanted to receive leave on demand might have also applied for the leave inappropriately or were not entitled to it due to employment conditions. 13.8% of the respondents did not express their opinion on the topic.

Figure 7. *The employees' possibility to choose when they start and finish work*

Source: Own creation.

Figure 8. *Possibility to use the unplanned holiday leave*



Source: *Own creation.*

To examine the organization of work in the surveyed company, the following statements were used in the questionnaire:

- my superiors organize my work well,
- my superiors respect the work that I perform,
- the work that I do matters,
- my supervisor tries to understand my needs,
- I can count on my superiors and colleagues in case of personal problems,
- my superior clearly outlines his expectations towards my job,
- there is good communication between employees in the company,
- there is an atmosphere of trust and camaraderie in the company,
- I have the opportunity to learn something from my superiors,
- the remuneration I receive is adequate to the scope of my duties,
- I regularly receive an increase in my basic remuneration,
- the frequency in which I receive cash bonuses and benefits is satisfactory,
- the company organizes non-financial incentive programmes,
- I feel that the company is well managed,
- the working conditions are appropriate.

The respondents were supposed to mark their answers using a 5-point scale where 1 means I do not agree, and 5 means I agree. The results of the carried out research are presented in Figure 9. The survey assumed that answers in the range between <4.5-5> are to be considered as a perfect mark, <3.84-4.5> a good mark, <3-3.8> an average mark, and below <3> a poor mark. The average mark of all the examined factors was 3.64, reflecting the average level of work organization in the surveyed company from the fish processing industry. The following statements have received a good mark:

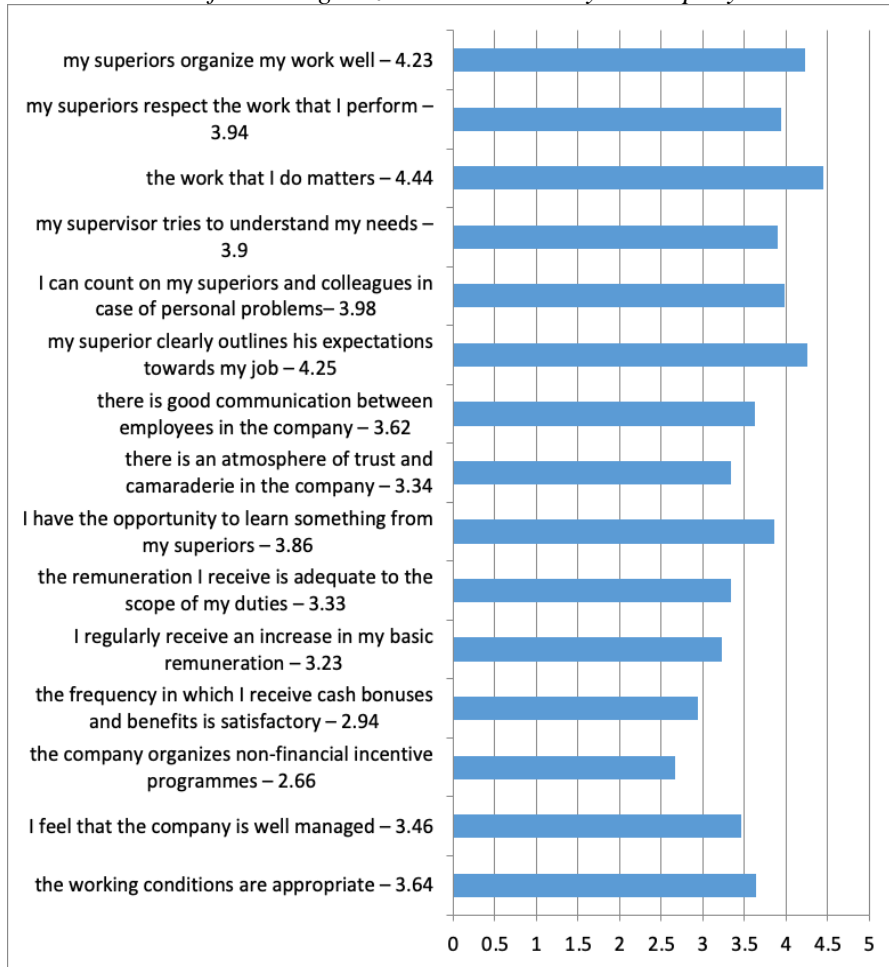
- the work that I do matters – 4.4,
- my superior clearly outlines his expectations towards my job – 4.25,
- my superiors organize my work well – 4.23.

The following statements have received a poor mark:

- the company organizes non-financial incentive programmes – 2.66,

- the frequency in which I receive cash bonuses and benefits is satisfactory – 2.94.

Figure 9. Variables of work organization in the surveyed company



Source: Own creation.

5. Discussion

The prerequisite for a good organization of work in the production area is the appropriate organization of the manufacturing processes and maintaining the machines on an ongoing basis. Based on the respondents' responses (Figure 2), the impact of excessive workload does not positively affect the quality of performed activities. It leads to an increase in the number of errors made during the production process. Poor organization means not only time pressure but also the introduction of unintentional confusion in the production hall. Based on the obtained results, it can be concluded that work organization at BG Production is clear, consistent, and is

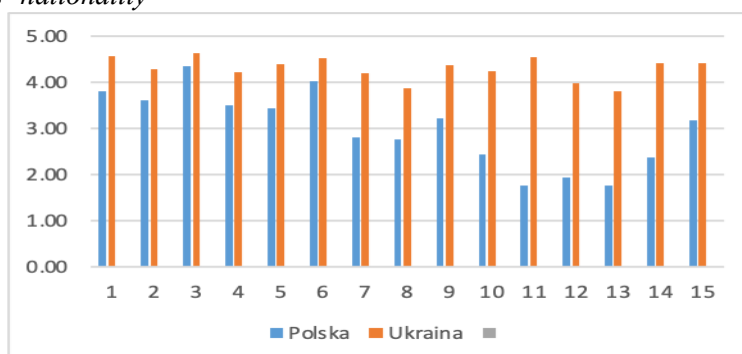
evaluated well by its employees. The machines and devices used for production do not breakdown easily; thus, the production process is not disorganized. Other failures are systematically and effectively removed. The company is sufficiently equipped with components and auxiliary materials necessary for the production to be organized smoothly. The transfer of information is another important factor. Instructions must be clear and legible for the recipient. They cannot be contradictory. A message can be verbal, non-verbal, or mixed (verbal and non-verbal). The most important thing is for the recipient to understand what the sender is trying to transmit. The language barrier may influence unclear information transfer in the surveyed company. The company hires Poles, Ukrainians, Moldovans, Filipinos, and Nepalese. This situation forces team leaders to operate in several languages, which is not easy and makes communication difficult. Intercultural problems additionally contribute to the company's communication problems.

The research showed that the BG Production enterprise employees evaluated their work organization at an average level (3.65). This confirms the H1 hypothesis. The organization's strong points are matters relating to the general organization of work, appreciation of the importance of work, and superiors' clear outline of labor expectations. The employees had assessed these variables at a good level. The problem, however, is with the motivation system used in the company. There is a lack of non-financial incentive programs in the organization, and cash bonuses and benefits are rarely paid out.

Based on the analysis of the data obtained from the organization as well as from the observations, it can be concluded that more attention is being paid to human resources and workplace equipment every year, which bodes well for further development of the company and increases its efficiency. Currently, the BG Production company focuses more on developing its infrastructure, work systems, and reward mechanisms. This might be the result of ongoing marketing activities and competitiveness in the fish production sector. The assessment of 15 variables responsible for the organization of work in the surveyed company has been presented in Figure 10 from views of the employees' nationality. The data shows that Ukraine employees' perceived work better than Polish workers for all the analyzed variables. The differences are statistically relevant at the level of significance $\alpha = 0.05$. The results support the H2 hypothesis.

The differences between the groups are major – the average mark for Polish workers reached 3 points, which means it is on the boundary between an average and poor evaluation. For the Ukrainians, however, the assessment was at a high level, with 4.29 points. The differences are, to a large extent, a result of cultural differences. Polish workers are used to good work organizations, and thus they evaluated their working conditions as moderately organized. On the other hand, Ukrainians, which are used to a lower standard of working conditions, are satisfied with practically every aspect of their work.

Figure 10. Variables of work organization in the surveyed company divided by employees' nationality



Source: Own creation.

6. Conclusions

The conducted research enabled the work organization assessment in the surveyed company from the fish processing industry. The results confirmed the H1 hypothesis: The work organization assessment level in the surveyed enterprise is average. The employees' evaluation of the work organization reached 3.64 points and can be considered an average score. Supervisors organized work well, they clearly outlined their expectations towards their employees, and employees were convinced that their work mattered. However, the drawback was the incentive system of the organization, and particularly a remote possibility to obtain cash bonuses, benefits, and non-financial incentive programs.

The research also confirmed the H2 hypothesis: In the surveyed enterprise, there are statistically significant differences in assessing the effectiveness of work between the Polish and Ukrainian employees. The study indicated statistically relevant differences (at the level of significance $\alpha = 0.05$) in assessing work organization between Polish and Ukrainian workers. Ukrainians evaluated the working conditions much better (4.29) than the Polish workers (3). The research suggests that hiring foreigners can be profitable as they are much more satisfied with work than domestic workers.

The main limitation of the presented research in this publication is that they were carried out based on only one organization. It seems that they reflect well the functioning of the surveyed organization from the fish processing industry, but they cannot generalize an entire population due to the specific nature. Another limitation is the operationalization of the variables related to the study of work efficiency. This means a certain selection of issues that can be studied in this scope, but a different selection of variables could result in other research findings.

References:

- Bakker, A.B, Demerouti, E. 2007. The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology*, 22, 309-328.
- Bąk, E. 2006. *Elastyczne formy zatrudnienia*. Warszawa: Biblioteka Monitora Prawa Pracy.
- Becker, C., Scholl, A. 2006. A survey on problems and methods in generalized assembly line balancing. *European Journal of Operational Research*, 168(3), 694-715.
- Brand, E., Körner, T., Perrenoud, S., Pintaldi, F. 2019. Towards a cross-national comparison of quality of employment. An analysis based on data from Finland, Germany, Israel, Italy and Switzerland. *Statistical Journal of the IAOS*, 35, 465-480. DOI 10.3233/SJI-180472.
- Directive 2003/88/EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organization of working time. *Official Journal L* 299, 9-19. Retrieved from: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32003L0088:EN:NOT>.
- Eisenhardt, K.M., Sull, D. 2001. What is strategy in the new economy? *Harvard Business Review*, 79(1), 106-117.
- Gazizulina, A., Eskina, E., Vasilieva, I., Valeeva, O. 2017. The Reasons for the Increase in Self-Organization in Companies, *International Journal of Reliability, Quality and Safety Engineering*, 24(6), 1740002 -1740013. DOI: 10.1142/S0218539317400022.
- Gheorghe, M. 2020. Considerations on the meaning of the notion of “working time” in the light of recent C.J.E.U. jurisprudence. *Perspectives of Law and Public Administration*, 9(1), 58-64.
- Iacovoiiu, V.B. 2020. An Empirical Analysis of the Relationship between Wages and Working Time. *Economic Insights - Trends and Challenges*, 9(72), 1, 23-30.
- Idris, F., Naqshbandi, M.M. 2019. Exploring competitive priorities in the service sector: evidence from India. *International Journal of Quality and Service Sciences*, 11(2), 167-186. DOI 10.1108/IJQSS-02-2018-0021.
- Keese, M. 2020. The Future Of Work In The Visegrad Group Of Countries. *Society and Economy*, 42, 124-145. DOI 10.1556/204.2020.00011.
- Khalili, Shavarini, S., Salimian, H., Nazemi, J., Alborzi, M. 2013. Operations strategy and business strategy alignment model. *International Journal of Operations & Production Management*, 33(9), 1108-1130. DOI 10.1108/IJOPM-12-2011- 0467.
- Kłos, B. 2013. Czas pracy w Polsce na tle innych państw członkowskich Unii Europejskiej. *Studia BAS*, 4(36), 57-96.
- Leitold, D., Vathy-Fogarassy, A., Abonyi, J. 2019. Empirical working time distribution-based line balancing with integrated simulated annealing and dynamic programming. *Central European Journal of Operations Research*, 27, 455-473. DOI 10.1007/s10100-018-0570-7.
- Liszczyński, T. 2017. *Prawo pracy*. Warszawa: Wolters Kluwer.
- LO, 2007. *Decent Working Time: Balancing Workers' Needs with Business Requirements*. Geneva: International Labour Office 2007. Retrieved from: [http://www.ilo.org/travail/whatwe do/publications/WCMS_145391/lang-en/index.htm](http://www.ilo.org/travail/whatwe%20do/publications/WCMS_145391/lang-en/index.htm).
- Lozano Platonoff, A. 2013. Czas na rozwój. Myślenie strategiczne w pracy i życiu codziennym. *Management and Business Administration. Central Europe*, 21, 1(120), 22-29. DOI: 10.7206/mba.ce.2084-3356.43.
- Miśkiewicz, R., Wolniak, R. 2020. Practical Application of the Industry 4.0 Concept in a Steel Company, *Sustainability*, 12(14), 5776, doi.org/10.3390/su12145776.

- Olkiewicz, M. 2018. Quality improvement through foresight methodology as a direction to increase the effectiveness of an organization. *Contemporary Economics*, 12(1), 69-80. DOI: 10.5709/ce.1897-9254.264.
- Olkiewicz, M., Wolniak, R., Grebski, M.E., Olkiewicz, A. 2019. A Comparative Analysis of the Impact of the Business Incubator Center on the Economic Sustainable Development of the Region in USA and Poland. *Sustainability*, 11(1), 173. DOI 10.3390/su11010173.
- Olkiewicz, M., Wolniak, R., Ostapko, B. 2018. The analysis of dependencies between extraction and resource consumption in 2008-2014 on the example of Glińsko Gravel pit. *Archives of Mining Sciences*, 63(4), 801-812. DOI 10.24425/ams.2018.124976.
- Ricarda Servaty, R., Pergera, G., Harth V., Mache, S. 2018. Working in a cocoon: (Co)working conditions of office nomads – a health related qualitative study of shared working environments. *Work*, 60, 527-538. DOI:10.3233/WOR-182760.
- Rizescu, A.M., Bucăța G. 2020. Relationship between innovation, organizational and interorganizational change. *Annals of the “Constantin Brâncuși” University of Târgu Jiu, Economy Series*, 3, 65-70.
- Rubmann, M., Lorenz, M., Gerbert, P., Waldner, M., Justus, J., Engel, P., Harnisch, M. 2015. Industry 4.0: the future of productivity and growth in manufacturing industries. Technical report 9, Boston Consulting Group.
- Serrano, M.R. 2019. Regulating Working Time in the Philippines: The Role of Statutory Regulations, Collective Bargaining, and Employee-Oriented Flexibilization. *Employee Relations Law Journal*, 45(2), 37-61.
- Spinuzzi, C. 2012. Working alone together. *Journal of Business and Technical Communication*, 26, 399-441.
- Suciu, A., Ion, G. 2019. Stand-by time from home is paid working time (RO). *EELC*, 4, 267-271. DOI: 10.5553/EELC/187791072019004004014.
- Szurgacz, H. 2017. *Prawo pracy*. Warszawa: Difin.
- Tarigan, Z.J.H. 2018. The impact of organization commitment to process and product innovation in improving operational performance. *International Journal of Business and Society*, 19(2), 335-346.
- United Nations Economic Commission for Europe. 2015. Handbook on Measuring Quality of Employment. A Statistical Framework, Geneva. Retrieved from: https://www.unece.org/stats/publications/stat_qua_emp.html.
- Withers, M.C., Ireland, R.D., Miller, D., Harrison, J.S., Boss, D.S. 2018. Competitive Landscape Shifts: The Influence of Strategic Entrepreneurship on Shifts in Market Commonality. *Academy of Management Review*, 43(3), 349-370.
- Wolniak, R. 2019. The Level of Maturity of Quality Management Systems in Poland - Results of Empirical Research, *Sustainability*, 11(15), 4239. doi.org/10.3390/su11154239.
- Wolniak, R., Saniuk, S., Grabowska, S., Gajdzik, B. 2020. Identification of energy efficiency trends in the context of the development of industry 4.0 using the Polish steel sector as an example. *Energies*, 13(11), 2867.